REMARKS

First, a fresh Petition and requisite fee for consideration of the previously submitted IDS(copy of Form PTO 1449) are enclosed.

Turning to the merits of the action, the first issue raised by the Examiner is the rejection of Claim 18 under 35 U.S.C. 112, second paragraph, as being Indefinite, presumably because of its dependency upon a cancelled claim.

By this amendment, Claim 18 has been made dependent upon Claim 16. In addition, we have noted that the particle size range of 1 to 5 mm is outside of the particle size range of 0.8 to 10 mm, as recited in claim 11, from which claim 18 indirectly depends. Accordingly, the claim has been further amended to recite a particle size range of 0.8 to 5 mm to avoid any issue of indefiniteness.

The only remaining substantive issue is the rejection of claims 1, 4-10 and 20 under 35 U.S.C. 102(e) as anticipated by, or in the alternative under 35 U.S.C 103(a) as being obvious in view of the teaching of Laine et al. US patent no.6,551,960.

It is respectfully submitted that the Examiner's position is not well taken

First, although it now applies to fewer claims, the Examiner's position is identically stated as in the last action, including the admission that our catalyst "is not identically described". At the very least, this means that the 102(e) rejection is untenable.

Regarding the 103(a) issue, there is no attempt to establish a prima facie case of obviousness. Clearly, when one reference is used, its teaching must be combined with the common general knowledge of a person skilled in the

art, otherwise, it is no more than a lack of Novelty issue. This has not been done.

The Examiner continues to argue that columns 2-4 and 8 teach equimolar Pt and Ru. However, our broadest claim 1 as amended in the last response, does not cover this ratio.

Moreover, column 2 discloses an incredibly long wish list of unenabled metal ratios.

Column 3 discloses unenabled particle sizes in the micron range i.e. less than 1 micron, less than 0.1 micron and less than 0.05 microns in lines 61 to 63. The reference goes on to state in lines 64-66 i.e. ..." systems where the catalyst loading..are more prone to produce micron size particles...than nanometer size particles".

The Examiner will appreciate that regardless of lack of enablement, since 1 micron equals 1000 nm, the particle range disclosed is orders of magnitude larger than our claimed nanometer sized particles.

Column 4 discloses numerous unenabled catalysts, all of which are defined in terms of total metal loads, rather than specific metal ratios.

In fact, contrary to the Examiner's assertion the reference does not include any "XRD photos". Although reference is made at column 7, lines 62-63, that X-ray diffraction (XRD) and surface area analysis were also performed", and at column 8, line 6 onwards, that "XRD analysis of an impregnated carbon exhibited broad peaks indicative of nanosized Ru/Pt alloy particles", there is no indication anywhere in the reference that this was done, other than these general statements.

Rather, the reference photos in figures 2 to 4 are clearly identified in the Brief Description of the Drawings as FE-SEM micrographs of catalyst loaded on a single carbon support particle to illustrate the general morphology. It is further

submitted that persons skilled in the art are well aware of the fact that such micrographs are incapable of providing sufficient information to determine the identity of the particles, and hence, particle size with any degree of certainty. Further, even if we assume that what is shown for example in Figure 2, are catalyst particles, which they may not be, since there is no elemental composition information, their sizes are in the 25 nm range and hence much larger than ours.

Further, column 8 does include the general statement at line 62 "nanosized Ru/Pt alloy particles" . However, there is no enablement for this particle size range anywhere in the reference.

In fact, the only enabled subject matter appears in Table 2, and is restricted to Pt/Ru materials which are exclusively defined in terms of total metal loadings, rather than specific metal ratios, with no indication of particle sizes.

It is also emphasized that there is no indication in the reference of particle size control.

In summary, the reference does not teach or suggest anything other than a general unenabled wish list of metal ratios, let alone specifically defined Pt/Ru ratios, which include a major amount of Pt.

Further, regarding particle sizes, there are disclosed only general sizes, most of which relate to micron sized particles, with only one general reference to nanosized particles, with no enablement of any particle sizes, let alone our claimed specific particle size range in the low nanometer range.

Yet further, there is no teaching or suggestion of our claimed mixed catalyst phase material as in our claims 4, 6 or 20.

Turning to the Examiner's reaction to our previous arguments, we do not understand the reference to Wendt, which is not part of the current 103(a) rejection made by the Examiner. The Examiner appears to cite Wendt to

show that nanosized catalyst particles are known per se. Regardless, the only Pt/Ru composition disclosed in Wendt is a 50:50 mix. It is again emphasized that our claimed Pt/Ru compositions in the range of 70:30 to 80:20, coupled with their superior CH_3OH oxidation activity, is neither taught nor suggested in Wendt.

Accordingly, the Examiner is requested to re-consider these issues, and allow all of the current claims.